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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/664,993	09/18/2000	Gangfeng Cai	2039.006100	4102

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24
EXAMINER

NOLAN, SANDRA M

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 08/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/664,993

Applicant(s)

CAI ET AL.

Examiner

Sandra M. Nolan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 June 2003 (Paper No. 23) has been entered.

Claims

2. Claims 1-17 are pending.

Rejections Withdrawn

3. The 35 USC 112 rejection of claims 1-17 for new matter, as set out in section 4 of the attachment to the advisory action of 06 May 2003 (Paper No. 20) is withdrawn in view of the amendments to the claims in Paper No. 23.

4. The 35 USC 103 rejection of claims 1-12 and 16-17 as unpatentable over Ching (US 5,744,246) in view of Nordstrom (US 3,536,687) as discussed in section 2 of Paper No. 20, is withdrawn in order to apply the new ground of rejection below.

5. The 35 USC 103 rejection of claims 13-15 as unpatentable over Ching and Nordstrom with Katsumoto et al (US 6,139,770) as discussed in section 3 of Paper No. 20, is withdrawn in order to apply the new ground of rejection below.

New Rejections

Claim Rejections - 35 USC § 103

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsumoto et al in view of Nordstrom.

Katsumoto teaches the production of containers (col. 2, line 4) for food (col. 9, line 45) from multilayer composites having polyethylene terephthalate barrier layers located outside of oxygen scavenging layers (col. 9, lines 17-24). The oxygen scavenging layers used contain unsaturated polymers (col. 6, lines 48-64, metal salts (col. 7, line 57) and photoinitiators (col. 2, lines 54-59). Cobalt oleate and cobalt stearate are recited at col. 8, lines 1-2.

Katsumoto fails to teach the specific oxygen properties recited in applicants' claim 1 or the polymers recited there.

Nordstrom teaches the copolymers recited in applicants' claim 1 and says that they crosslink in air (col.1, lines 49-52). The pendant cyclohexenyl groups are

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described at col. 2, lines 41-57). The styrene and alkyl (meth)acrylate monomers used in applicants' polymer backbone are taught at col. 3, lines 3-21).

The references are analogous because they both deal with polymers that react with oxygen.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the copolymers of Nordstrom as the unsaturated polymers in the containers of Katsumoto in order to produce containers that scavenge oxygen from the air.

The motivation to employ the Nordstrom copolymers in the containers of Katsumoto is found at col. 1, lines 49-52 of Nordstrom, where the reactivity of the Nordstrom copolymers with air is taught.

It is deemed desirable to make containers that scavenge atmospheric oxygen before it can reach the container's contents, so that the contents can be preserved.

The selection of a suitable copolymer to produce the oxygen scavenging properties recited in claim 1 would be a matter of optimization of properties.

The selection of a suitable photoinitiator would be a matter of optimization of properties.

The use of containers suggested by the combination of Katsumoto and Nordstrom to house particular substances is deemed a matter of intended use and does not serve to distinguish the containers from those suggested by the combination.

Conclusion

Any inquiry concerning this communication should be directed to the Examiner, Sandra M. Nolan, whose telephone number is 703/308-9545. The Examiner can normally be reached on Monday through Thursday, from 6:30 am to 4:00 pm, Eastern Time.

If attempts to reach the Examiner by telephone are unsuccessful, her supervisor, Harold Pyon, can be reached at 703/308-4251. The general fax number for the art unit is 703/305-5436. The fax number for after final communications is 703/872-9310. The receptionist answers 703/308-0661.



S. M. Nolan
Patent Examiner
Technology Center 1700

SMN/smn
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12 August 2003